

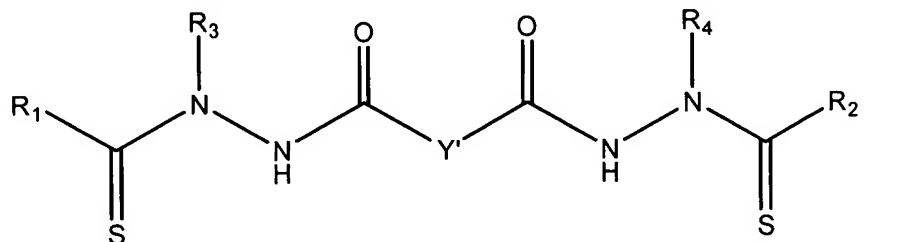
Amendments to the Claims

Please cancel Claims 1-7, 15, 18-24, 32 and 36. Please amend Claims 8, 11-13, 16, 25, 28-30, 33, 34, 35, 37, 38 and 39. Please add new Claims 40-50. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1-7. (Canceled)

8. (Currently Amended) A method of treating a subject with a multi-drug resistant cancer selected from the group consisting of leukemia, uterine sarcoma and melanoma, said method comprising administering to the subject an effective amount of a compound represented by the following structural formula:



or a pharmaceutically acceptable salt thereof, wherein:

Y' is a covalent bond or -C(R₇R₈)-;

R₁ and R₂ are each a substituted or unsubstituted phenyl group;

R₃ and R₄ are each a substituted or unsubstituted aliphatic group;

R₇ is -H; and

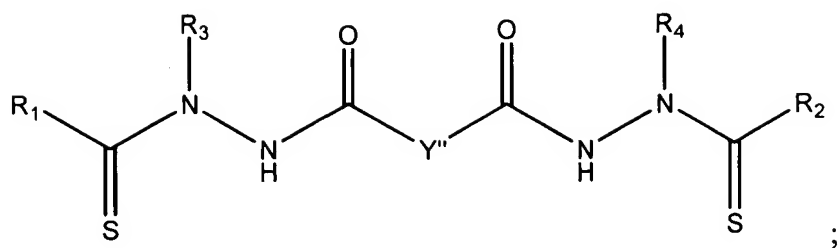
R₈ is -H, an aliphatic or substituted aliphatic group.

9. (Original) The method of Claim 8 wherein R₁ and R₂ are the same and R₃ and R₄ are the same.
10. (Original) The method of Claim 9 wherein R₃ and R₄ are each an alkyl group and R₈ is -H or methyl.

11. (Currently Amended) The method of Claim 10 wherein ~~R₁ and R₂ are each a substituted or unsubstituted phenyl group~~ and R₃ and R₄ are each methyl or ethyl.

12. (Currently Amended) The method of Claim 11 wherein the phenyl group represented by R₁ and the phenyl group represented by R₂ are optionally substituted with one or more groups selected from OH, -Br, -Cl, -I, -F, -OR^a, -O-COR^a, -COR^a, -CN, -NO₂, -COOH, -SO₃H, -NH₂, -NHR^a, -N(R^aR^b), -COOR^a, -CHO, -CONH₂, -CONHR^a, -CON(R^aR^b), -NHCOR^a, -NRCOR^a, -NHCONH₂, -NHCONR^aH, -NHCON(R^aR^b), -NR^cCONH₂, -NR^cCONR^aH, -NR^cCON(R^aR^b), -C(=NH)-NH₂, -C(=NH)-NHR^a, -C(=NH)-N(R^aR^b), -C(=NR^c)-NH₂, -C(=NR^c)-NHR^a, -C(=NR^c)-N(R^aR^b), -NH-C(=NH)-NH₂, -NH-C(=NH)-NHR^a, -NH-C(=NH)-N(R^aR^b), -NH-C(=NR^c)-NH₂, -NH-C(=NR^c)-NHR^a, -NH-C(=NR^c)-N(R^aR^b), -NR^d-C(=NH)-NH₂, -NR^d-C(=NH)-NHR^a, -NR^d-C(=NH)-N(R^aR^b), -NR^d-C(=NR^c)-NH₂, -NR^d-C(=NR^c)-NHR^a, -NR^d-C(=NR^c)-N(R^aR^b), -NHNH₂, -NHNHR^a, -NHNR^aR^b, -SO₂NH₂, -SO₂NHR^a, -SO₂NR^aR^b, -CH=CHR^a, -CH=CR^aR^b, -CR^c=CR^aR^b, -CR^c=CHR^a, -CR^c=CR^aR^b, -CCR^a, -SH, -SR^a, -S(O)R^a, -S(O)₂R^a, a non-aromatic heterocyclic group, ~~a substituted non-aromatic heterocyclic group~~, a benzyl group, ~~a substituted benzyl group~~, an aryl group ~~or substituted aryl group~~, wherein R^a-R^d are each independently an alkyl group, ~~substituted alkyl group~~, benzyl, ~~substituted benzyl~~, aromatic ~~or substituted aromatic~~ group, or, -N(R^aR^b), taken together, form a ~~substituted or unsubstituted~~ non-aromatic heterocyclic group.

13. (Currently amended) A method of treating a subject with a multi-drug resistant cancer selected from the group consisting of leukemia, uterine sarcoma and melanoma, said method comprising administering to the subject an effective amount of a compound ~~The method of Claim 1 wherein the compound is represented by the following structural formula:~~



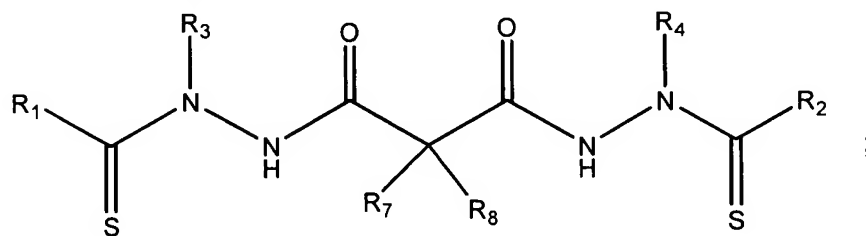
or a pharmaceutically acceptable salt thereof, wherein

Y'' is a covalent bond or -CH₂-; [[and]]

R₁ and R₂ are both a substituted or unsubstituted aliphatic group; and

R₃ and R₄ are both a substituted or unsubstituted alkyl group.

14. (Original) The method of Claim 13 wherein R₁ and R₂ are both C3-C8 cycloalkyl group optionally substituted with at least one alkyl group.
15. (Canceled)
16. (Currently Amended) The method of Claim ~~13~~13 wherein R₁ and R₂ are both cyclopropyl or 1-methylcyclopropyl.
17. (Previously presented) A method of treating a subject with a multi-drug resistant cancer selected from the group consisting of leukemia, uterine sarcoma and melanoma, said method comprising administering to the subject an effective amount of a compound represented by the following structural formula:



or a pharmaceutically acceptable salt thereof, wherein:

R₁ and R₂ are both phenyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both phenyl; R₃ and R₄ are both ethyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 4-cyanophenyl; R₃ and R₄ are both methyl; R₇ is methyl; R₈ is -H;

R₁ and R₂ are both 4-methoxyphenyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both phenyl; R₃ and R₄ are both methyl; R₇ is methyl; R₈ is -H;

R₁ and R₂ are both phenyl; R₃ and R₄ are both ethyl; R₇ is methyl; R₈ is -H;

R₁ and R₂ are both 4-cyanophenyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 2,5-dimethoxyphenyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 2,5-dimethoxyphenyl; R₃ and R₄ are both methyl; R₇ is methyl; R₈ is -H;

R₁ and R₂ are both 3-cyanophenyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 3-fluorophenyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 4-chlorophenyl; R₃ and R₄ are both methyl; R₇ is methyl; R₈ is -H;

R₁ and R₂ are both 2-dimethoxyphenyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 3-methoxyphenyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 2,3-dimethoxyphenyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 2,3-dimethoxyphenyl; R₃ and R₄ are both methyl; R₇ is methyl; R₈ is -H;

R₁ and R₂ are both 2,5-difluorophenyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 2,5-difluorophenyl; R₃ and R₄ are both methyl; R₇ is methyl; R₈ is -H;

R₁ and R₂ are both 2,5-dichlorophenyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 2,5-dimethylphenyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 2,5-dimethoxyphenyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both phenyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 2,5-dimethoxyphenyl; R₃ and R₄ are both methyl; R₇ is methyl; R₈ is -H;

R₁ and R₂ are both cyclopropyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both cyclopropyl; R₃ and R₄ are both ethyl; R₇ and R₈ are both -H;

R₁ and R₂ are both cyclopropyl; R₃ and R₄ are both methyl; R₇ is methyl; R₈ is -H;

R₁ and R₂ are both 1-methylcyclopropyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 1-methylcyclopropyl; R₃ and R₄ are both methyl; R₇ is methyl and R₈ is -H;

R₁ and R₂ are both 1-methylcyclopropyl; R₃ and R₄ are both methyl; R₇ is ethyl and R₈ is -H;

R₁ and R₂ are both 1-methylcyclopropyl; R₃ and R₄ are both methyl; R₇ is *n*-propyl and R₈ is -H;

R₁ and R₂ are both 1-methylcyclopropyl; R₃ and R₄ are both methyl; R₇ and R₈ are both methyl;

R₁ and R₂ are both 1-methylcyclopropyl; R₃ and R₄ are both ethyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 1-methylcyclopropyl; R₃ is methyl, and R₄ is ethyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 2-methylcyclopropyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 2-phenylcyclopropyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both 1-phenylcyclopropyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both cyclobutyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both cyclopentyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both cyclohexyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both cyclohexyl; R₃ and R₄ are both phenyl; R₇ and R₈ are both -H;

R₁ and R₂ are both methyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are both methyl; R₃ and R₄ are both *t*-butyl; R₇ and R₈ are both -H;

R₁ and R₂ are both methyl; R₃ and R₄ are both phenyl; R₇ and R₈ are both -H;

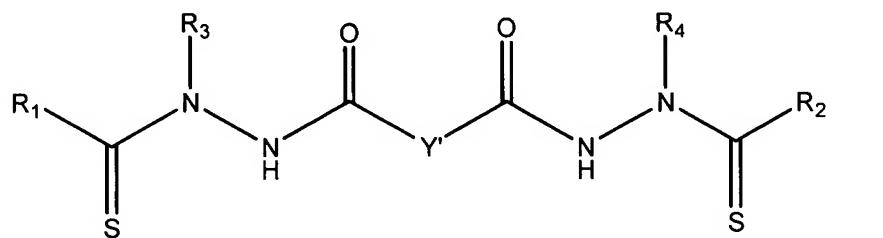
R₁ and R₂ are both *t*-butyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H;

R₁ and R₂ are ethyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H; or

R₁ and R₂ are both *n*-propyl; R₃ and R₄ are both methyl; R₇ and R₈ are both -H.

18-24. (Canceled)

25. (Currently amended) A method of treating a human subject with cancer selected from the group consisting of leukemia, uterine sarcoma and melanoma, said method comprising administering to the subject an effective amount of a compound ~~The method of Claim 24 wherein the compound is represented by the following structural formula:~~



Y' is a covalent bond or -C(R₇R₈)-;

R₁ and R₂ are each a substituted or unsubstituted [[aryl]] phenyl group;

R₃ and R₄ are each a substituted or unsubstituted aliphatic group;

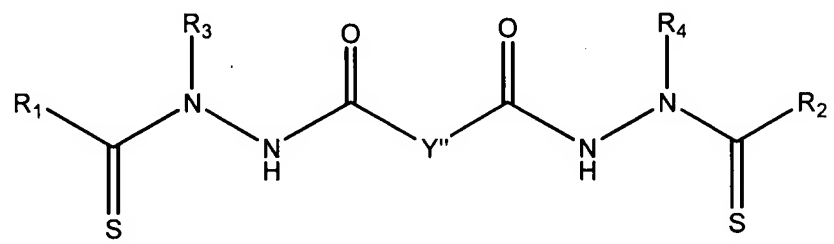
R₇ is -H; and

R₈ is -H, an unsubstituted aliphatic or substituted aliphatic group,

wherein the subject is optionally co-administered a second anti-cancer agent other than paclitaxel or a paclitaxel analog.

26. (Original) The method of Claim 25 wherein R_1 and R_2 are the same and R_3 and R_4 are the same.
27. (Original) The method of Claim 26 wherein R_3 and R_4 are each an alkyl group and R_8 is -H or methyl.
28. (Currently Amended) The method of Claim 27 wherein ~~R_1 and R_2 are each a substituted or unsubstituted phenyl group~~ and R_3 and R_4 are each methyl or ethyl.
29. (Currently Amended) The method of Claim 28 wherein the phenyl group represented by R_1 and the phenyl group represented by R_2 are optionally substituted with one or more groups selected from -OH, -Br, -Cl, -I, -F, -OR^a, -O-COR^a, -COR^a, -CN, -NO₂, -COOH, -SO₃H, -NH₂, -NHR^a, -N(R^aR^b), -COOR^a, -CHO, -CONH₂, -CONHR^a, -CON(R^aR^b), -NHCOR^a, -NRCOR^a, -NHCONH₂, -NHCONR^aH, -NHCON(R^aR^b), -NR^cCONH₂, -NR^cCONR^aH, -NR^cCON(R^aR^b), -C(=NH)-NH₂, -C(=NH)-NHR^a, -C(=NH)-N(R^aR^b), -C(=NR^c)-NH₂, -C(=NR^c)-NHR^a, -C(=NR^c)-N(R^aR^b), -NH-C(=NH)-NH₂, -NH-C(=NH)-NHR^a, -NH-C(=NH)-N(R^aR^b), -NH-C(=NR^c)-NH₂, -NH-C(=NR^c)-NHR^a, -NH-C(=NR^c)-N(R^aR^b), -NR^d-C(=NH)-NH₂, -NR^d-C(=NH)-NHR^a, -NR^d-C(=NH)-N(R^aR^b), -NR^d-C(=NR^c)-NH₂, -NR^d-C(=NR^c)-NHR^a, -NR^d-C(=NR^c)-N(R^aR^b), -NHNH₂, -NHNHR^a, -NHNR^aR^b, -SO₂NH₂, -SO₂NHR^a, -SO₂NR^aR^b, -CH=CHR^a, -CH=CR^aR^b, -CR^c=CR^aR^b, -CR^c=CHR^a, -CR^c=CR^aR^b, -CCR^a, -SH, -SR^a, -S(O)R^a, -S(O)₂R^a, a non-aromatic heterocyclic group, ~~a substituted non-aromatic heterocyclic group~~, a benzyl group, ~~a substituted benzyl group~~, an aryl group ~~or substituted aryl group~~, wherein R^a-R^d are each independently an alkyl group, ~~substituted alkyl group~~, benzyl, ~~substituted benzyl~~, aromatic ~~or substituted aromatic~~ group, or, -N(R^aR^b), taken together, form a ~~substituted or unsubstituted~~ non-aromatic heterocyclic group.

30. (Currently amended) A method of treating a human subject with cancer selected from the group consisting of leukemia, uterine sarcoma and melanoma, said method comprising administering to the subject an effective amount of a compound ~~The method of Claim 14 wherein the compound is represented by the following structural formula:~~



or a pharmaceutically acceptable salt thereof, wherein

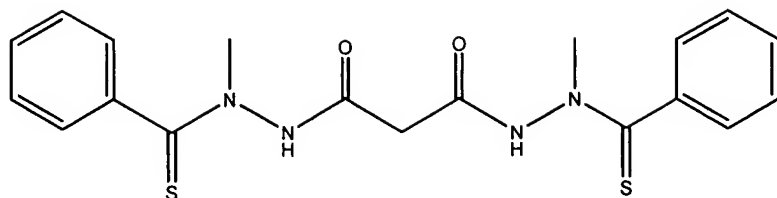
Y'' is a covalent bond or -CH₂-; and

R₁ and R₂ are both a substituted or unsubstituted aliphatic group; and

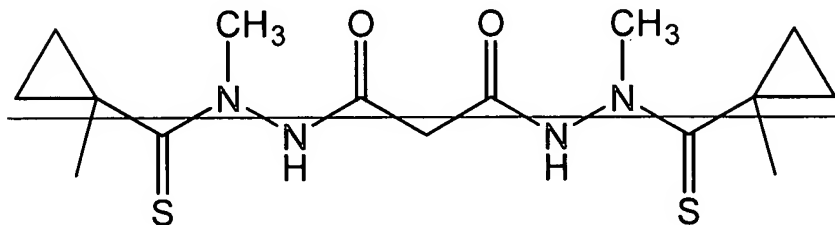
R₃ and R₄ are both a substituted or unsubstituted alkyl group,

wherein the subject is optionally co-administered a second anti-cancer agent other than paclitaxel or a paclitaxel analog.

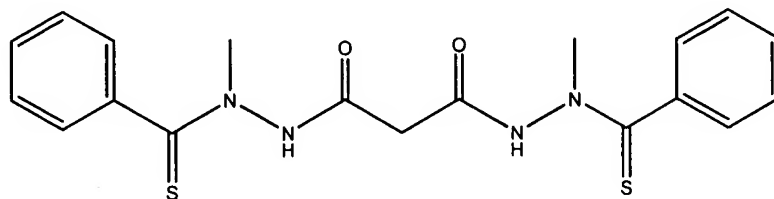
31. (Original) The method of Claim 30 wherein R₁ and R₂ are both C3-C8 cycloalkyl group optionally substituted with at least one alkyl group.
32. (Canceled)
33. (Currently Amended) The method of Claim ~~32~~30 wherein R₁ and R₂ are both cyclopropyl or 1-methylcyclopropyl.
34. (Currently amended) A method of treating a subject with a multi-drug resistant cancer selected from the group consisting of leukemia, uterine sarcoma and melanoma, said method comprising administering to the subject an effective amount of a compound represented by the following structural formula: ~~The method of Claim 1, wherein the compound is:~~



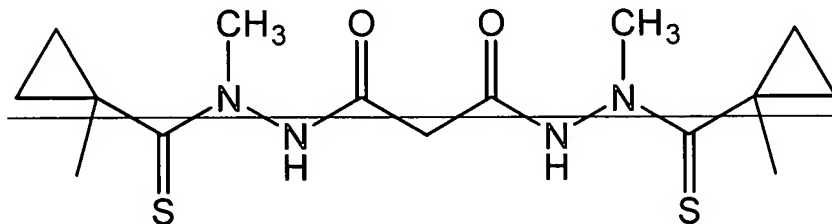
or a pharmaceutically acceptable salt thereof; or



35. (Currently amended) A method of treating a human subject with cancer selected from the group consisting of leukemia, uterine sarcoma and melanoma, said method comprising administering to the subject an effective amount of a compound represented by the following structural formula: The method of Claim 18, wherein the compound is:



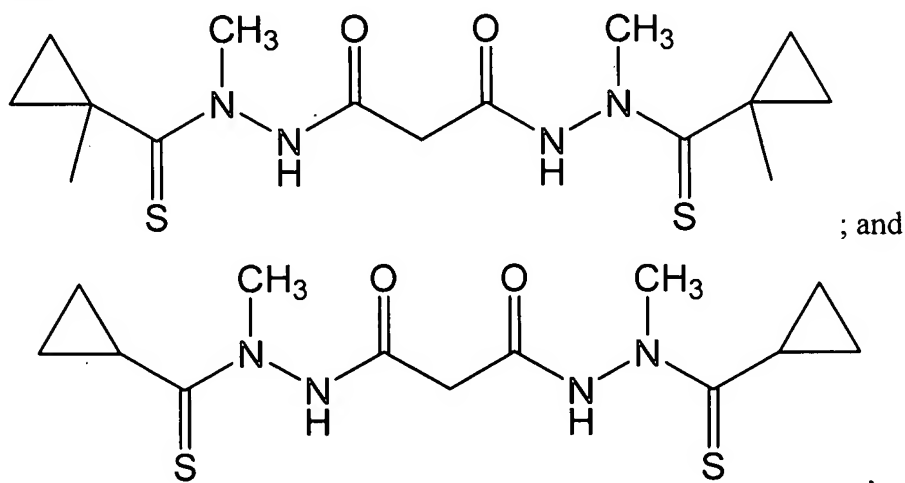
or a pharmaceutically acceptable salt thereof; or



wherein the subject is optionally co-administered a second anti-cancer agent other than paclitaxel or a paclitaxel analog.

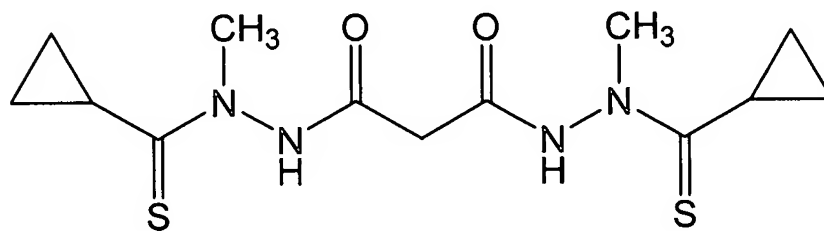
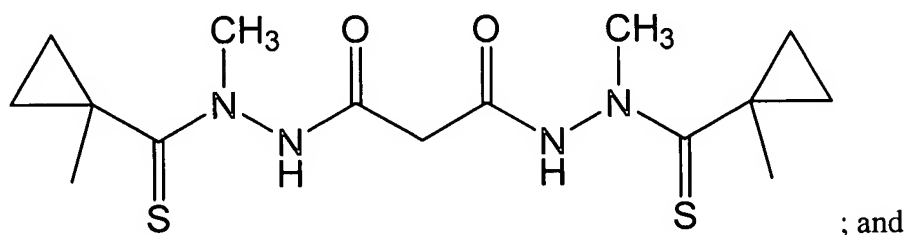
36. (Canceled)

37. (Currently amended) The method of Claim 8 ~~Claim 1~~, wherein the multi-drug resistant cancer is melanoma.
38. (Currently amended) The method of Claim 25 ~~Claim 18~~, wherein the cancer is ~~breast carcinoma or~~ leukemia.
39. (Currently amended) The method of Claim 25 ~~Claim 18~~, wherein the cancer is melanoma.
40. (New) The method of Claim 8, wherein the multi-drug resistant cancer is uterine sarcoma.
41. (New) The method of Claim 8, wherein the multi-drug resistant cancer is leukemia.
42. (New) The method of Claim 25, wherein the cancer is uterine sarcoma.
43. (New) A method of treating a subject with a multi-drug resistant cancer selected from the group consisting of leukemia, uterine sarcoma and melanoma, said method comprising administering to the subject an effective amount of a compound selected from the group consisting of:



or a pharmaceutically acceptable salt thereof.

44. (New) The method of Claim 43, wherein the multi-drug resistant cancer is leukemia.
45. (New) The method of Claim 43, wherein the multi-drug resistant cancer is uterine sarcoma.
46. (New) The method of Claim 43, wherein the multi-drug resistant cancer is melanoma.
47. (New) A method of treating a human subject with cancer selected from the group consisting of leukemia, uterine sarcoma and melanoma, said method comprising administering to the subject an effective amount of a compound selected from the group consisting of:



or a pharmaceutically acceptable salt thereof, wherein the subject is optionally co-administered a second anti-cancer agent other than paclitaxel or a paclitaxel analog.

48. (New) The method of Claim 47, wherein the cancer is leukemia.
49. (New) The method of Claim 47, wherein the cancer is uterine sarcoma.

50. (New) The method of Claim 47, wherein the cancer is melanoma.